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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/721,577

11/24/2003

Roy C. Krohn

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BROOKS KUSHMAN P.C.
1000 TOWN CENTER
TWENTY-SECOND FLOOR
SOUTHFIELD, MI 48075

EXAMINER

FEELY, MICHAEL J

ART UNIT

PAPER NUMBER

1712

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/721,577

Applicant(s)

KROHN, ROY C.

Examiner

Michael J. Feely

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1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0904.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Pending Claims

Claims 1-21 are pending.

Priority

1. Based on the continuation-in-part nature of the instant application, different claims are treated with different effective filing dates. After looking at the lineage of the instant application, it has been determined that: (1) claims 1-12 and 15-19 receive the effective filing date of November 24, 2003; and (2) claims 13, 14, 20, and 21 receive the effective filing date of October 6, 1999.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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3. Claims 13 and 14 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 and 8-16 of U.S. Patent No. 6,713,000.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the compositions of instant claims 13 and 14 are anticipated by the patented claims 1-4 and 8-16.

4. Claims 13 and 14 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 41 of U.S. Patent No. 6,916,501. Although the conflicting claims are not identical, they are not patentably distinct from each other because the compositions of instant claims 13 and 14 are anticipated by the patented claim 41.

5. Claims 1, 7-6, 20, and 21 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19, 23-28, and 31-35 of U.S. Patent No. 6,290,881. Although the conflicting claims are not identical, they are not patentably distinct from each other because: (1) the compositions of instant claims 1, 11, and 12 are anticipated by the patented claim 19; (2) the composition of instant claim 7 is anticipated by the combined teachings of the patented claims 3 and 19; (3) the composition of instant claim 8 is anticipated by the combined teachings of the patented claims 4, 6-9, and 19; (4) the composition of instant claim 9 is anticipated by the combined teachings of patented claims 16-19; (5) the composition of instant claim 10 is anticipated by the combined teachings of patented claims 18 and 19; (6) the compositions of instant claims 13 and 14 are anticipated by the patented claims 1-18 and 31-35; (7) the compositions of instant claims 15 and 16 are anticipated by the patented claim 19; and (8) the compositions of instant claims 20 and 21 are anticipated by the patented claims 23-28, 31, and 32.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 1-12, and 15-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Shirlin et al. (US Pat. No. 6,946,628).

Regarding claims 1-12, Shirlin et al. disclose: (1) a photocurable silver composition (column 5, lines 3-15) comprising: (1) an aliphatic acrylated urethane oligomer (column 5, lines 16-39); (2) an acrylated epoxy oligomer (column 5, lines 40-52); (3) an acrylated monomer selected from the group consisting of non-bridged cyclic acrylate monomers, non-cyclic acrylate monomers, and mixtures thereof (column 5, line 53 through column 6, line 18); (4) a

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photoinitiator (column 7, lines 7-30); (5) silver powder (column 6, lines 31-51); and (6) silver flakes in an amount of at least 20% relative to the weight of the silver powder (column 6, line 52 through column 7, line 6);

(2) wherein the acrylate monomer is described by formula 1 *see claim for structure* wherein R_1 is hydrogen or unsubstituted alkyl; and R_2 is non-cyclic functional group or a non-bridged cyclic group (column 5, line 53 through column 6, line 18); (3) wherein the acrylated monomer is a non-cyclic monomer and R_2 is a substituted or unsubstituted alkyl having more than 4 carbon atoms (column 5, line 53 through column 6, line 18); (4) wherein the acrylated monomer is a non-bridged cyclic acrylate monomer and R_2 is cycloalkyl, cycloalkenyl, or a substituted or unsubstituted aryl (column 5, line 53 through column 6, line 18); (5) wherein R_1 is hydrogen or methyl (column 5, line 53 through column 6, line 18); (6) wherein R_2 is phenyl, benzyl, dicyclopentenyl, dicyclopentenyl oxyethyl, cyclohexyl, or naphthyl (column 5, line 53 through column 6, line 18);

(7) wherein the aliphatic acrylated urethane oligomer is present in an amount of from about 3% to 8% of the silver composition (column 5, lines 16-39);

(8) wherein (1) is present in an amount of about 8% of the silver composition (column 5, lines 16-39); (2) is present in an amount of about 2% to 4% of the silver composition (column 5, line 40-52); (4) is present in an amount of about 3% to 6% of the silver composition (column 7, lines 7-30); (5) is present in an amount of about 50% to 60% of the silver composition (column 6, lines 31-51); and (6) is present in an amount of about 25% to 35% of the silver composition (column 6, line 52 through column 7, line 6);

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(9) further comprising a component selected from the group consisting of a flow promoting agent, an adhesion promoter, a wetting agent, a conductive carbon black powder, an antimony tin oxide powder, and mixtures thereof (column 6, lines 19-30);

(10) further comprising an antimony tin oxide powder and a flow promoting agent (column 6, lines 19-30); (11) further comprising a blend of polyacrylic oligomer and an acrylate monomer (column 5, line 16 through column 6, line 18); and

(12) further comprising an isobornyl acrylate monomer (column 5, line 53 through column 6, line 18).

Regarding claims 15-19, Shirlin et al. disclose: (15) a photocurable silver composition comprising: (1) an aliphatic acrylated urethane oligomer (column 5, line 16-39); (2) an acrylated epoxy oligomer (column 5, lines 40-52); (4) a photoinitiator (column 7, lines 7-30); (5) silver powder (column 6, lines 31-51); and (6) silver flakes in an amount of at least 20% relative to the weight of the silver powder (column 6, line 52 through column 7, line 6); further comprising (3) an acrylated monomer selected from the group consisting of non-bridged cyclic acrylate monomers, non-cyclic acrylate monomers, and mixtures thereof (column 5, line 53 through column 6, line 18);

(16) further comprising an isobornyl acrylate monomer (column 5, line 53 through column 6, line 18);

(17) wherein the acrylate monomer is described by formula 1 *see claim for structure* wherein R₁ is hydrogen or unsubstituted alkyl; and R₂ is non-cyclic functional group or a non-bridged cyclic group (column 5, line 53 through column 6, line 18); (18) wherein the acrylated monomer is a non-cyclic monomer and R₂ is a substituted or unsubstituted alkyl having more

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than 4 carbon atoms (column 5, line 53 through column 6, line 18); *(19)* wherein the acrylated monomer is a non-bridged cyclic acrylate monomer and R₂ is cycloalkyl, cycloalkenyl, or a substituted or unsubstituted aryl (column 5, line 53 through column 6, line 18).

Allowable Subject Matter

8. Claims 13, 14, 20, and 21 would be allowable if rewritten or amended to overcome the ODP rejection(s) set forth in this Office action; or with a timely filed terminal disclaimer.

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Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is 571-272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael J. Feely
Primary Examiner
Art Unit 1712

February 20, 2006

MICHAEL FEELY
PRIMARY EXAMINER